

IN THE CLAIMS

1. [Amended] A method for synchronizing state information in a security gateway cluster, said security gateway cluster comprising at least two nodes, said method:

- storing state information in a first node and in at least a second node of said at least two nodes in said security gateway cluster,
- state information stored in said first node comprises common state information and node-specific state information,
- defining for each node belonging to said security gateway cluster a node-specific backup group comprising at least one node-specific backup node,
- synchronizing said state information in said security gateway cluster by sending state information from said first node to at least said second node of said at least two nodes,
- detecting in said security gateway cluster a predetermined irregularly occurring action,

- initiating said step of synchronization of state information as a response to said predetermined irregularly occurring action, said predetermined irregularly occurring action including a modification of state information so that modification of common state information initiates synchronization of common state information to all other nodes of said security gateway cluster, and modification of node-specific state information initiates synchronization of node-specific state information to nodes belonging to backup group of said first node.

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2. [Previously amended] A method according to claim 1, wherein said predetermined action is modification of said state information stored in said first node.

3. [Previously amended] A method according to claim 2, wherein in the step of synchronizing state information only modified part of the state information stored in said first node is sent.

4. [Previously amended] A method according to claim 3, wherein the modified part of the state information is sent from said first node to all other nodes of said security gateway cluster.

5. [Previously amended] A method according to claim 4, wherein the modified part of the state information relates to a certain protocol, authentication information, virtual private network parameters or intrusion detection system.

6. [Previously amended] A method according to claim 1, wherein in the step of synchronizing state information all state information stored in said first node is sent.

7. [Previously amended] A method according to claim 1, further comprising the step of:

- 5 - periodically synchronizing state information from said first node to at least a second node.

8. [Cancelled]

9. [Cancelled]

10. [Previously amended] A method according to claim 1, wherein said predetermined action affects number of nodes in said security gateway cluster, said method further comprising the step of:

- redefining for at least one node belonging to said security gateway cluster a backup group comprising at least one backup node.

11. [Previously amended] A method according to claim 1, wherein said predetermined action is said first node failing to continue normal operation.

12. [Previously amended] A method according to claim 1, wherein said predetermined action is said second node requesting for state information.

13. [Previously amended] A method according to claim 1, wherein said predetermined action is said first node initiating a transition to offline state.

20 14. [Previously amended] A method according to claim 1, wherein said predetermined action is handling of data packets relating to a communication session in at least two nodes, one of them being said first node, and in that said synchronization of state information is performed between at least said at least two nodes.

25 15. [Previously amended] A method according to claim 1, wherein said predetermined action is a receipt of a data packet in said first node of said security gateway cluster, said data packet relating to a command to open a new connection via said security gateway cluster.

30 16. [Previously amended] A method according to claim 15, further comprising the step of:

- delaying sending of said data packet from said first node until said synchronization of state information is performed.

17. [Previously amended] A method according to claim 1, further comprising the step of:

5 - delaying sending of a plurality of data packets from said first node until said synchronization of state information is performed.

18. [Cancelled]

19. [Cancelled]

20. [Cancelled]

10 21. [Cancelled]

22. [Cancelled]

23. [Cancelled]

24. [Cancelled]

25. [Cancelled]

15 26. [Cancelled]

27. [Cancelled]

28. [Cancelled]

29. [Cancelled]

30. [Cancelled]

20 31. [Cancelled]

32. [Cancelled]

33. [Amended] A node of a security gateway cluster comprising

- means for storing state information of said node, said state information comprising common state information and node-specific state information,

- means for defining for said node a node-specific backup group of nodes comprising at least one node-specific backup node,
- means for synchronizing said state information in said security gateway cluster by sending state information from said node to at least one other node in said security gateway cluster,

- means for detecting a predetermined irregularly occurring action,
 - means for triggering said synchronization means as a response to said predetermined irregularly occurring action, said predetermined irregularly occurring action including a modification of state information so that modification of common state information initiates synchronization of common state information to all other nodes of said security gateway cluster, and modification of node-specific state information initiates synchronization of node-specific state information to nodes belonging to backup group of said node.

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34. [Amended] A security gateway cluster having a plurality of nodes, at least one node comprising

- means for storing state information of said node, said state information comprising common state information and node-specific state information,
- means for defining for said node a node-specific backup group of nodes comprising at least one node-specific backup node,
- means for synchronizing said state information in said security gateway cluster by sending state information from said node to at least one other node in said security gateway cluster,

- means for detecting a predetermined irregularly occurring action,
 - means for triggering said synchronization means as a response to said predetermined irregularly occurring action, said predetermined irregularly occurring action including a modification of state information so that modification of common state information initiates synchronization of common state information to all other nodes of said security gateway cluster, and modification of node-specific state information initiates synchronization of node-specific state information to nodes belonging to backup group of said node.

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35. [Amended] A computer readable medium containing a computer-executable configured to perform at least the following routines for synchronizing state information in a security gateway cluster of at least two nodes when said program code is run on a computer node in said security gateway cluster:

- storing state information in a said node and in at least a second node in said security gateway cluster, said stored state information stored comprising common state information and node-specific state information,
- defining for said node a node-specific backup group of nodes comprising at least one node-specific backup node,
- 5 - synchronizing said state information in said security gateway cluster by sending state information from said node to at least said second node,
- detecting in said security gateway cluster a predetermined irregularly occurring action,
- 10 - initiating said step of synchronization of state information as a response to said predetermined irregularly occurring action, said predetermined irregularly occurring action including a modification of state information so that modification of common state information initiates synchronization of common state information to all other nodes of said security gateway cluster, and modification of node-specific state information initiates synchronization of node-specific state information to nodes
- 15 belonging to backup group of said node.

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